code table which is used. In the AAC standard there are e.g. eleven code tables with different absolute value ranges. The code table No. 1 comprises e.g. spectral values having an absolute value from -1 to +1, while the code table No. 11 can code spectral values from -8191 to +8191. The higher the code table is the greater is the value range which it permits. This means that code tables with low numbers represent only relatively small values, and thus permit only relatively small errors, while code tables with higher numbers can represent relatively large values and thus also relatively large errors.

If an error occurs in a low code table it may well not be audible since an erroneous spectral line results which, seen absolutely, does not differ that much from the originally correct spectral line. If an error occurs in the highest code table, however, this error can in principle assume any of the absolute values in this code table. If a spectral line coded with the highest code table had a small value, for example, and due to an error during transmission is decoded in the decoder as a spectral line with the highest absolute value of this code table, this erroneous spectral line will certainly be audible.

As far as error tolerance is concerned, the most important code table is therefore the highest code table (in the AAC standard the code table No. 11) since this code table permits escape values in the range from $-2^{13} + 1$ (-8191) to $+2^{13} - 1$ (+8191).

According to a further aspect of the present invention, short windows are used for transient signals in the AAC standard. With short windows the frequency resolution is decreased in favour of a higher temporal resolution. The priority code words are determined in such a way that psychoacoustically significant spectral values, i.e. spectral values at lower

frequencies or spectral values from higher code tables, are sure to be placed on raster points. Scale factor band interleaving, a feature of e.g. the AAC standard, is revoked for this purpose.

Preferred embodiments of the present invention are explained in more detail below making reference to the enclosed drawings, in which

Fig. 1 shows an example of a rastering according to the second aspect of the present invention of a coded bit stream containing code words; and

Fig. 2 shows an arrangement of code words which increases linearly with the frequency according to the prior art.

To illustrate the present invention, priority code words are shown hashed in Fig. 2, which represents a known arrangement of code words of different lengths which increases linearly with the frequency. In Fig. 2 priority code words are the code words No. 1 - No. 5. As has already been explained above, the code words which are assigned to spectral values of low frequency are priority code words if the audio signal e.g. contains a high speech content or relatively many low-frequency tones. The code words No. 6 - 10 in Fig. 2 are associated with higher frequency spectral values which, while contributing to the overall impression of the decoded signal, do not greatly affect the auditory sensation and are thus psychoacoustically less significant.

Fig. 1 shows a bit stream with a number of raster points 10 - 18, where the distance between the raster point 10 and the raster point 12 is labelled D1 and the distance between the raster point 14 and the raster point 16 is labelled D2.

As far as exposition of the first aspect of the present invention is concerned, only the part of the bit stream extending from the raster point 10 to the raster point 14 will be considered. The priority code words 1 and 2 are aligned in the raster to ensure that the important spectral portions, which are located in the lower frequency range in the example signal shown in Fig. 2, are not subject to error propagation when decoding. Non-priority code words, which are not hatched in Fig. 1 and 2, are arranged after the code words so as to fill up the raster. It is not necessary for the non-priority code words to fit into the raster in one piece, since the length of a Huffman code word is known from the word itself. A decoder thus knows whether it has read only part of a code word. In this case it will automatically add to the first part of the code word a certain number of bits following the priority code word after the next raster point. It is therefore possible to insert a first part of a non-priority code word in a first free position in the raster and the remaining part at some other place, as is shown for the non-priority code words 7, 8 and 9, each of which has been subdivided into two in the bit stream, namely into 7a, 7b and 8a, 8b and 9a, 9b.

As has already been described, the second part of the bit stream of Fig. 1 illustrates the second aspect of the present invention. If the raster distance D1 were not altered to a smaller raster distance D2, a raster with the spacing D1 in which all the priority code words 1 to 5 are to be arranged would lead to such a long bit stream that there would not, so to speak, be enough non-priority code words to fill up all the spaces remaining in the raster. Therefore only so many priority code words are extracted from an audio signal as can be inserted in the bit stream so that essentially no free places remain, i.e. without causing the bit stream to be extended unnecessarily.